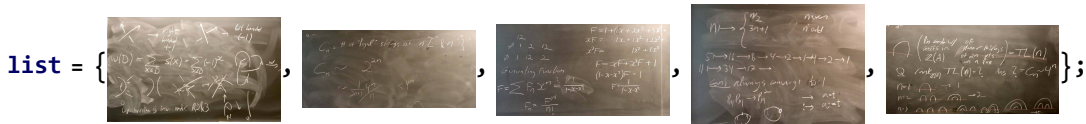


```

improveimage[List_List] := Grid[Table[{i, improveimage[i]}, {i, List}]]
improveimage[pic_Image] :=
Module[{imgd = ImageData[pic], n, m, boxsize = 12, normavg, imgnorm, improvedimage},
  n = Dimensions[imgd][[1]];
  m = Dimensions[imgd][[2]];
  imgnorm = Apply[Function[ $\frac{\text{Norm}\{\{#1, \#2, \#3\}}{\sqrt{3}}$ ], imgd, {2}];
  normavg = Table[Mean@Mean[
    imgnorm[Max[1, i - boxsize] ;; Min[n, i + boxsize],
    Max[1, j - boxsize] ;; Min[m, j + boxsize]]], {i, 1, n}, {j, 1, m}];
  improvedimage = Table[If[imgnorm[[i, j]] > -0.18 * normavg[[i, j]]4 + 1.2 * normavg[[i, j]],
    {0, 0, 0}, {1, 1, 1}],
    {i, 1, Dimensions[imgnorm][[1]]}, {j, 1, Dimensions[imgnorm][[2]]}];
  Image[improvedimage]
]

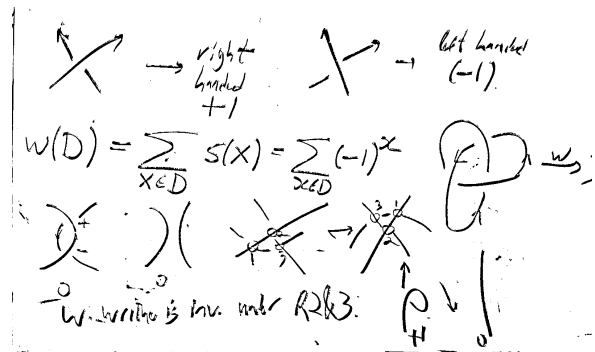
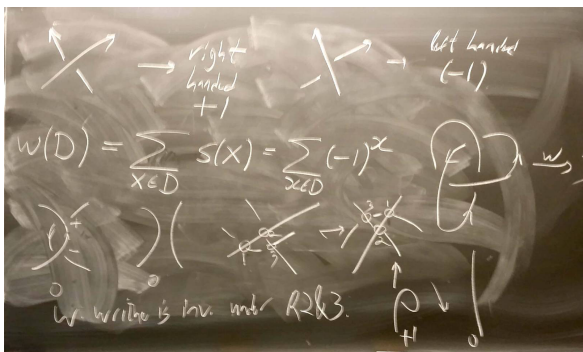
```



```

result = improveimage[list];
Magnify[result, 4]

```



"  
 $C_n = \# \text{ of "legal" strings of } n \text{ "[\&quot; &quot;]}$   
 $C_n \sim 2^{2n}$   
 $\sim \frac{1}{2n+1} \frac{4^n}{n} < 4^n$ "

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$\begin{matrix} & 1 & 2 & 1 & 2 \\ \emptyset & 1 & 2 & 1 & 2 \\ \emptyset & 1 & 2 & 2 & \end{matrix}$ <p>Generating function.</p> $F = \sum F_n x^n = \frac{1}{1-x-x^2}$ $F_n = \frac{F^{(n)}}{n!}$	$F = 1 + (1x + 2x^2 + 3x^3 + \dots)$ $xF = 1x + 1x^2 + 2x^3 + \dots$ $x^2F = 1x^2 + 1x^3 + \dots$ $F = xF + x^2F + 1$ $(1-x-x^2)F = 1$ $F = \frac{1}{1-x-x^2}$
---	--

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